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46320	7590	06/07/2006	EXAMINER	
CAREY, RODRIGUEZ, GREENBERG & PAUL, LLP STEVEN M. GREENBERG 1300 CORPORATE CENTER WAY SUITE 105G WELLINGTON, FL 33414			SZYMANSKI, THOMAS M	
			ART UNIT	PAPER NUMBER
			2134	

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Please find below and/or attached an Office communication concerning this application or proceeding.



**DETAILED ACTION**

1. Claims 1-34 have been examined.

***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Regarding Claims 1-22: The claimed invention is directed to non-statutory subject matter. That which is claimed within the above referenced claims is not of a concrete and tangible nature. The contents of the claims are directed to an algorithm, and a storage means that is defined as a data file. Both an algorithm and a data file are not tangible since neither is contained within any concrete means but may exist solely as a non-tangible format.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6, 9, 11-17, 20-28, and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Bahls et al U.S. Patent No. 5,706,513.

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6. Regarding Claims 1, 11, and 12: storing a key or a certificate in a storage means (Fig 7, Col 3 lines 1-52) Bahls et al stores the data object (key) and private key as denoted.

Fragmenting the key or certificate into non-uniform lengths according to an algorithm (Fig 7, Col 3 lines 41-60, Col 5 lines 33-67, Col 6 lines 1-3) As defined non-uniform means not homogeneous in structure or composition throughout. It can be clearly seen from the exemplary situation that the object is divided into N pieces. Bahls et al states that each piece is of a specified length except where the object length is not a multiple of the segment size thus the segments are not of a uniform size since the last segment will not equal the others in length.

Fragments are intermixed with storage means (Fig 7, Col 3 lines 41-60) As prescribed the data object fragments and key portions are stored together thus being intermixed as can be seen from figure 7.

7. Regarding Claim 2: The storage means is a data file (Fig 2, Fig 7, Col 3 lines 5-9) Bahls et al stores the key in the storage medium containing fragments of the data object. It is stated that the key is stored with the individual fragments thus being stored as a data file.

8. Regarding Claim 3: Storage means contains random bit patterns (Col 5 lines 66-67) Bahls states that the segment may be partially composed of nulls. Nulls as defined relate to material of no consequence, effect, or value, as such these nulls may be of any nature such as that of random bit patterns since a random bit pattern is simply any sequence of bits.

9. Regarding Claim 4: Fragmenting the entity includes fragmenting the bytes (Col 5 lines 33-66) The division of any digital file has to be in such a manner as to be fragmenting the bytes, since the bytes are what the file is composed of, and the act of fragmenting an object consists of separating it amongst its smaller pieces.

10. Regarding Claim 5: Location of storing fragments is determined by the algorithm (Col 5 lines 33-67, Col 6 lines 1-3) As stated by Bahls the file is fragmented in relation to its storage location since the fragments are created as a purpose of the storage location.

11. Regarding Claim 6: Algorithm can be used to find the fragments (Col 5 lines 33-67, Col 6 lines 1-3) As stated previously an algorithm must be used to perform such a function and furthermore the implementation of such an algorithm provides for a reciprocal process. The provided key that is stored with the data objects provides for putting the file back together and relates each piece with the next through the fragments of the key.

12. Regarding Claim 9: Bit map as a record of fragment locations (Fig 2, Fig 7) As it can be seen from the figures the Implementation of this system provides for a bit map as a record of fragment locations. During the processing of these files they are staged into queues and as such have formed a map of the actual file since it is no longer together but segmented into bits and thus only represented while staged. These segmented bit patterns provide for the reconstruction of the file upon it's use or the file being placed back into permanent storage.

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13. Claims 13-17, 20-28, and 33-34 are an apparatus and computer program product implementation of the above rejected claims and as such are rejected on the same basis.

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 7-8, 18-19, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bahls et al U.S. Patent No. 5,706,513 as applied to claim 1 above, and further in view of Holloway UK Patent Application Publication GB 2318486A.

16. Bahls et al discloses a system for the storage and fragmentation of keys. Bahls et al, however, fails to disclose the use of a password with the storage means. (Bahls et al Col 6 lines 9-13)

17. Holloway teaches the use of a password in combination with a storage means and an algorithm.

18. It is a desirable function within any system but especially one that is of a sensitive nature to be able to password protect the information and integrity of the security apparatus of that system. The implementation of a password is a common security function to prevent unauthorized access to a system and is known to be effective and desirable to utilize. (Abstract, pg 3 line 22 – pg 4 line 42)

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19. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the password protection schema of Holloway with the system of Bahls et al for the advantages of improved security of data.

20. Regarding Claim 7: Storage means has a pass code used by the algorithm (Holloway - Abstract, Pg 4 lines 36 - 42) Holloway provides an encrypted file, that is encrypted by an additional key or password, that can only be decrypted by use of that same key. The encrypted file is within a storage means since the key is combined with another value thus the storage means utilizes the password by way of an algorithm to encrypt the data.

21. Regarding Claim 8: Fragments stored at locations determined by pass code (Holloway - Abstract, Pg 4 line 36 – pg 6 line 20) The location of the fragments is determined by the manner of the encryption of the key by the password since the algorithm that is implemented is combined with the key thereby transforming the fragments and thus changing the composition of the file to transform the location of the actual key within the file by way of the operation performed upon it. Furthermore, through the teachings of Bahls as applied to the combination with Holloway it is clear to see that the encrypted key is stored in fragments amongst the data file.

22. Claims 18-19 and 29-30 are an apparatus and computer program product implementation of the above rejected claims and as such are rejected on the same basis.

23. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bahls et al U.S. Patent No. 5,706,513 as applied to claim 1 above.

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24. Regarding Claim 10: Fragment stored immediately after another if storage location is occupied. It is well known within the art that when implementing an algorithm such as a hash algorithm for the placement of objects amongst potential storage spots that when a collision occurs the object is stored immediately following the occupied spot. Thus Official notice is given that performing such an operation is a well known practice within the art.

25. Claim 32 is a computer program product implementation of the above rejected claim and as such is rejected on the same basis.

### ***Response to Arguments***

26. Applicant's arguments filed 3/30/2006 have been fully considered but they are not persuasive.

27. In regards to the applicant's arguments against the above 101 rejection the examiner provides the following. The applicant has stated that the Board decision regarding Lundgren overcomes such a rejection, however, in *Lundgren*, the issue was whether methods need to be "in the technological arts" and thus be computer or machine implemented. The Board's decision (with dissents) was that the answer is no. Lundgren in no way superceded or was contrary to the decisions by the Courts in *Lowry* and *Warmerdam*. To be patent-eligible, functional descriptive material must still be claimed in combination with a hardware element (e.g., an appropriate computer readable medium) so as to become a component of a computer and enable the functionality to be realized to produce a practical application when executed. A practical



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application can be established through either causing a physical transformation or by providing a useful, concrete and tangible result. Functional descriptive material (e.g., software), per se, is still non-statutory. If each of the elements of the claim would reasonably be interpreted by one of ordinary skill in the art in light of Applicant's disclosure as software, it's a system of software, per se, which is functional descriptive material, and is non-statutory. As cited in MPEP 2106 section IV the final step of "equating" the process outputs to the values of the last set of process inputs found to constitute storing the result of calculations (In re Gelnovatch, 595 F.2d 32, 41 n.7, 201 USPQ 136, 145 n.7 (CCPA 1979); and - step of "transmitting electrical signals representing" the result of calculations (In re DeCastelet, 562 F.2d 1236, 1244, 195 USPQ 439, 446 (CCPA 1977) ("That the computer is instructed to transmit electrical signals, representing the results of its calculations, does not constitute the type of post solution activity' found in Flook, [437 U.S. 584, 198 USPQ 193 (1978)], and does not transform the claim into one for a process merely using an algorithm. The final transmitting step constitutes nothing more than reading out the result of the calculations.")). As seen from the above description the applicants claim language is directed toward a data file that is characterized simply as output of an algorithm and is thus non-statutory.

28. In regards to applicant's assertions against the teaching of a key, a key is simply a piece of data just as the data object of the present invention (Col 3 lines 6-9). The recitation of a data object anticipates a key, as disclosed the system of Bahls includes applications that utilize data objects just as any cryptographic application utilizes a data

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object such as a key and as recited (Col 1 lines 26-35, 55-67) actions taken with the data object are implementation specific and as such the system inherently provides for the data object as a key when the application denotes such a process. Furthermore, passages (Col 3 line 65 – Col 4 line 17) recite that the data object is retrieved initially via a public key, which contains a private key and subsequent portions contain further segments of such a key until the retrieved key is equivalent to the predetermined value as such denoting that portions of a key are stored with each data object and thus anticipating the claim language of the applicant.

29. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., bits in addition to the stored object that are random and exhibit no discernable distinction from typical data) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The applicant has stated that the recitation of nulls does not anticipate random bit patterns, however, the definition of random denotes that any value is intrinsically random and the applicant seems to be referring to data that is probabilistically not discernable from normal datum, however such language is not present within the claim language. Additionally, the applicants recitation of random bit patterns is also anticipated by the private keys that are included within the data as is well known such keys are unique and demonstrate no discernable pattern over regular data.

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30. The applicant has stated "Bahls does not appear to determine where the fragments are stored", but from the disclosure of Bahls it is clear that this is exactly what the system is doing. In Bahls the data is segmented depending on the storage location since the purpose as disclosed is that the data within Bahls is too large for a single block it is segmented between several blocks thus being stored by the algorithm that segments the data object and further related to each other through the key so that the fragments may be pieced back together properly between data blocks.

31. In support of the rejection against claim 10 the article hash collision has been provided, which details "when multiple lookup keys are mapped to identical indices....a hash collision occurs. The most popular ways of dealing with this are...open addressing (searching other array indices nearby for an empty space)."

32. All arguments of the applicant are believed to have been addressed in the above response.

### ***Conclusion***

33. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of art disclosed by the references cited and the objections made. Applicant must show how the amendments avoid such references and objections. See 37 CFR 1.111(c).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Szymanski whose telephone number is 571-272-8574. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on 571-272-6962. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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TMS

*Jacques H. Louis*  
JACQUES H. LOUIS  
PRIMARY EXAMINER